

US009999726B2

(12) United States Patent

Yodfat et al.

(54) VENTED DISPENSING DEVICE AND METHOD

(71) Applicant: Roche Diabetes Care, Inc.,

Indianapolis, IN (US)

(72) Inventors: Ofer Yodfat, Maccabim-Reut (IL);

Avraham Neta, Gilon (IL)

(73) Assignee: Roche Diabetes Care, Inc.,

Indianapolis, IN (US)

(*) Notice: Subject to any disclaimer, the term of this

patent is extended or adjusted under 35

U.S.C. 154(b) by 223 days.

This patent is subject to a terminal dis-

claimer.

(21) Appl. No.: 14/977,921

(22) Filed: Dec. 22, 2015

(65) Prior Publication Data

US 2016/0106914 A1 Apr. 21, 2016

Related U.S. Application Data

(63) Continuation of application No. 13/947,859, filed on Jul. 22, 2013, now Pat. No. 9,254,359, which is a (Continued)

(51) **Int. Cl.**A61M 5/168

A61B 5/145

(2006.01) (2006.01)

(Continued)

(52) U.S. Cl.

CPC *A61M 5/16822* (2013.01); *A61B 5/14532* (2013.01); *A61M 5/142* (2013.01);

(Continued)

(10) Patent No.: US

US 9,999,726 B2

(45) **Date of Patent:**

*Jun. 19, 2018

(58) Field of Classification Search

CPC A61M 5/14532; A61M 5/14248; A61M 5/142; A61M 5/1486; A61M 5/1723;

A61M 2005/14264; A61M 2005/14204

See application file for complete search history.

(56) References Cited

U.S. PATENT DOCUMENTS

3,631,847 A 1/1972 Hobbs, II 3,770,607 A 1/1973 Williams (Continued)

FOREIGN PATENT DOCUMENTS

CN 2919644 Y 7/2007 WO 2005082436 A1 9/2005 (Continued)

Primary Examiner — Laura Bouchelle

(74) Attorney, Agent, or Firm — Dinsmore & Shohl, LLP

(57) ABSTRACT

Disclosed is a fluid dispensing device that includes at least one reservoir to hold the therapeutic fluid, at least one other unit requiring communication with ambient air, at least partly, to operate, and at least one housing defining an interior to retain the at least one reservoir and the at least one other unit. The at least one housing has at least one vent port formed on one or more of its walls. The at least one vent port is adapted to direct or communicate air to maintain pressure equilibrium between the air pressure in the interior of the at least one housing and the ambient air pressure outside the at least one housing, and provide communication with the ambient air to the at least one other unit requiring air to enable operation of the at least one other unit.

15 Claims, 17 Drawing Sheets

